Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: John Hillenbrand
HC 62 Box 5
Jordan, MT 59337

2. *Type of action*: Surface Water Application for Beneficial Water Use Permit 40D 30159443

3. *Water source name*: Unnamed Tributary to South Fork Woody Creek

4. *Location affected by project*: Section 2, T20N, R39E, Garfield County

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:* The proposed project is for an appropriation of 27.5 acre-feet of water per year from an existing reservoir on an Unnamed Tributary to South Fork Woody Creek. The reservoir was built in the 1950s and is located in SW Sec 2, T20N, R39E, Garfield County. The purpose is year-round stock use for 400 animal units. The reservoir has a surface area of 10 acres and a maximum depth of 6 feet.

6. *Agencies consulted during preparation of the Environmental Assessment: (including agencies with overlapping jurisdiction)*

Montana Department of Natural Resources and Conservation (DNRC)
Montana Department of Environmental Quality website
Montana Natural Heritage Program website
Montana Bureau of Mines and Geology website
U.S. Fish and Wildlife Service—National Wetlands Inventory website
USDA Web Soil Survey

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The proposed project is within DNRC Basin 40D, Big Dry Creek. Water is diverted through a dam 8-10 feet high, 200 feet long and 20 feet wide, located on the South Fork Woody Creek, an ephemeral tributary to Woody Creek. In this semi-arid region of Montana, streams are predominantly ephemeral—flowing only in response to snowmelt and precipitation events. The Department has analyzed the proposed appropriation's physical and legal availability per ARM 36.12.1702, 36.12.1704, and 36.12.1705. The proposed reservoir will impound surface water; there are multiple tributaries downstream which will contribute flow to the main South Fork Woody Creek.

Determination: No significant impact

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The proposed reservoir stores freshwater from rain and snow precipitations. South Fork Woody Creek is not assessed for water quality by DEQ; it drains into Woody Creek which then flows into Big Dry Creek. The MT DEQ's Final 2020 Water Quality Integrated Report and its 303(d) list reported the Big Dry Creek as not fully supporting aquatic life and primary contact recreation, and not assessed for agriculture and drinking water. Nitrogen and phosphorus levels were among the identified concerns.

The beneficial use of the surface water is livestock. Because the reservoir has existed since the 1950s, it is not expected to create new impact.

Determination: No significant impact.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

According to the Montana Bureau of Mines and Geology, lower Hell Creek-Fox Hills Formations is an important aquifer in eastern Montana. The aquifer may be as thick as 400 feet, varying from less than 200 to 2000 feet below the surface. Groundwater quality of the Hell Creek and Fox Hills Formations is characterized by elevated alkalinity and salinity within suitable level for livestock consumption. The proposed reservoir would store water from seasonal precipitation events; it could help recharge the groundwater aquifer.

Determination: No significant impact.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The point of diversion is an earthen dam 8-10 feet high, 200 feet long and 20 feet wide built in the 1950s. The reservoir has a surface area of approximately 9 acres with a maximum depth of 6 feet. Aerial photos from the past 20 years have shown the dam holding water consistently. The means of diversion, construction and operation of the appropriation works appear to be sound.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The proposed project occurs on privately owned land. Adjoining sections are also owned by the Applicant. There is Bureau of Land Management (BLM) land nearby; the U.S. Fish and Wildlife Service (USFWS) Charles M. Russell National Wildlife Refuge is 3 to 8 miles to the north. This region's land cover is characterized by mixed-grass prairie on rolling hills, and occasional ponderosa pine and juniper on steep erosive ridges. Cattle grazing and wildlife are the main land use. Because of the project's proximity to federal lands, the analysis of endangered and threatened species will look at BLM and USFWS designations within Garfield County:

USFWS—Black-footed Ferret is listed as Endangered. Piping Plover is listed as Threatened. There are no federally-listed plant species in the project area.

Black-Footed Ferret

Black-footed Ferrets are not known to migrate; adults use about a 100-acre range semi-nomadically. Black-footed Ferrets are intimately tied to prairie dogs throughout their range and have only been found in association with prairie dogs. They are therefore limited to the same open habitat used by prairie dogs such as Great Plains mixed-grass prairie, sagebrush steppe and badlands. Reintroductions have occurred annually in Montana on federal and/or tribal land since 1994 with varying success.

Piping Plover

Piping Plovers primarily select unvegetated sand or pebble beaches on shorelines or islands in freshwater and saline wetlands. They usually arrive in Montana in early May and leaves the state by late August. Most of the observations reported in the state are for breeding individuals. If conditions are right, alkali wetlands, lakes, reservoirs, and rivers can all provide the essential features required for nesting. 26-62 birds have been observed in the last 10-15 years in northeast corner of Garfield County.

BLM—Twenty five terrestrial animal species are designated as "Sensitive" in Garfield County. They include 5 mammal, 14 bird, 5 reptile, 1 amphibian species. No plant species have special status by BLM.

> Mammals: Townsend's Big-eared Bat, Black-tailed Prairie Dog, Eastern Red Bat, Hoary Bat, Swift Fox.
>
> Birds: Sprague's Pipit, Golden Eagle, Burrowing Owl, Ferruginous Hawk, Chestnut-collared Longspur, Greater Sage-Grouse, Mountain Plover, Black-billed Cuckoo, Caspian Tern, Loggerhead Shrike, Long-billed Curlew, Sage Thrasher, Thick-billed Longspur, Brewer's Sparrow.
>
> Reptiles: Spiny Softshell, Snapping Turtle, Plains Hog-nosed Snake, Western Milksnake, Greater Short-horned Lizard.
>
> Amphibian: Great Plains Toad

The proposed reservoir is within a Core Area for sage grouse habitat. The Applicant has obtained a consultation review by the Montana Sage Grouse Habitat Conservation Program in November 29, 2021. The review indicated that the Applicant's proposed activity is consistent with the Montana Sage Grouse Conservation Strategy.

Determination: No significant impact.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

According to the National Wetlands Inventory website, the proposed reservoir itself is mapped as "Freshwater Pond", the 0.2 mile-reach upstream as well as the 0.6-mile downstream are "Freshwater emergent wetland". This appears to be a result of the man-made dam, as natural reaches in the vicinity do not have such designation.

Determination: No significant impact.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

There are many stock reservoirs on the Applicant's property, which provide benefit to the wildlife. The proposed dam has existed since the 1950s and is not expected to create significant new impact.

Determination: No significant impact.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to USDA Web Soil Survey, Ethridge loam and Yamacall-Rock outcrop with soft-Kobase association are the two most extensive soil units in the reach where the proposed reservoir is located. The Yamacall-Rock outcrop with soft-Kobase association, on 8 to 70 percent slopes, occurs from drainage bottom to hills and knolls and consists of deep and well-drained loam mostly on the toeslope position derived from alluvium. It is nonsaline to very slight saline (0.0 to 3.0 mmhos/cm), with depth to water table at more than 80 inches. Its suitability as a pond/reservoir area is rated very limited, indicating high seepage potential in the upper 60 inches due to factors such as hydraulic conductivity, depth to fractured bedrock or excessive slope. Its suitability as an embankment material is rated somewhat limited, indicating the soil has features that are moderately favorably for this purpose. (Desirable characteristics for embankment material include favorable compaction and resistance to seepage, piping and erosion. Undesirable features include less than 5 ft of suitable material and a high content of stones, organic matter, or salts or sodium.)

The Ethridge loam is a deep silty clay loam that occurs on 0 to 4 percent slopes of stream terraces derived from alluvium. It is well drained, very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm), with depth to water table at more than 80 inches. Its suitability as a pond/reservoir area is rated not limited, meaning the soil has favorable features for holding water behind a dam or embankment. Its suitability as an embankment material is rated as somewhat limited.

Determination: No significant impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

According to USDA Web Soil Survey, the Ethridge loam has a range production of 1482 pounds per acre per year in a normal year. The Yamacall-Rock outcrop with soft-Kobase association averages 890 pounds per acre per year. Their forage productivity is adequate to support the Applicant's stocking rate. While cattle use at the reservoir would likely invite weed invasion, it is not expected to exceed what normally occurs in cattle-concentrated area.

Determination: No significant impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

This dam has existed since the 1950s and is not expected to create new impact to air quality.

Determination: No significant impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands.*

Determination: NA--Project is located on private land.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No other additional impacts on environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in this area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The project is located on remote, rural private land which has been historically used for cattle ranching. It will not affect the quality of recreational and wilderness activities.

Determination: No significant impact.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

The project is located on remote private land and will not affect human health.

Determination: No significant impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: There are no additional government regulatory requirement on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impact

(*b)* *Local and state tax base and tax revenues?* No significant impact

(c) *Existing land uses?* No significant impact

(*d)* *Quantity and distribution of employment?* No significant impact

(e) *Distribution and density of population and housing?* No significant impact

(f) *Demands for government services?* No significant impact

(g) *Industrial and commercial activity?* No significant impact

(h) *Utilities?* No significant impact

(i) *Transportation?* No significant impact

(j) *Safety?* No significant impact

(k) *Other appropriate social and economic circumstances?* No significant impact

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts This application does not present possible secondary impacts on the physical environment and human population.

Cumulative Impacts This application does not present possible cumulative impacts on the physical environment and human population.

3. ***Describe any mitigation/stipulation measures:*** N/A

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** An alternative analysis of the project identified a No-Action alternative to granting the requested water right to the Applicant. The applicant would not be able to obtain water right for the existing dam under the No-Action alternative. This alternative would not have any direct impacts that are typically associated with a stock reservoir.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the applicant proves the criteria in 85-2-311, MCA are met.

2 Comments and Responses

3. ***Finding:*** *Based on the significance criteria evaluated in this EA, is an EIS required?* No

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified, therefore an EIS is not necessary.

Name of person(s) responsible for preparation of EA:
Name: Lih-An Yang
Title: Water Resources Specialist
Date: April 26, 2023